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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,851	12/22/2003	Jean-Marie Tran	871.0118.U1(US)	9087
29683 7590 10/17/2007 HARRINGTON & SMITH, PC 4 RESEARCH DRIVE SHELTON, CT 06484-6212			EXAMINER WILLIAMS, LAWRENCE B	
			ART UNIT	PAPER NUMBER
			2611	
			MAIL DATE	DELIVERY MODE
			10/17/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/743,851	<b>Applicant(s)</b> TRAN, JEAN-MARIE	
	<b>Examiner</b> Lawrence B. Williams	<b>Art Unit</b> 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-14,16-23 and 25-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-14,16-23 and 25-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 16 July 2007 has been entered.

### ***Drawings***

2. This application has been filed with informal drawings, which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-2, 38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 1 recites the limitation, “ where at least partially removing comprises passing the received CDMA signal

Art Unit: 2611

through a filter selected to **have a filter characteristic that approximates an inverted amplitude or power response** of the at least one of the transmit filter or the receive filter”. The specification does not describe how this filter characteristic is accomplished, i.e., equations or drawings. Nor does the specification provide sufficient detail as to what exactly is meant by **“approximates an inverted amplitude or power response”**. Thus the specification does not enable one skilled in the art to make and/or use the invention.

Claims 2, 38 are rejected based on its dependency upon rejected claim 1.

5. Claims 4-9, 17-20, 26-31, 33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 4, 17, 26, 33 all recite the “...multi-path profile  $x$  from a searcher profile  $y$ , where  $y = F * x + v...$ ”. The specification does provide sufficient information about this equation, i.e., what is applicant’s “searcher profile” and how this equation applies to “a least squares criterion” or how this equation applies to “removing an effect of at least one of a transmit or receive filter “. Thus the specification does not enable one skilled in the art to make and/or use the invention.

Claims 5-9, 18-20, 27-31 are rejected based on its dependency upon rejected claims, 4, 17, and 26 respectfully.

Accordingly, the claims 4-9, 17-20, 26-31, 33 have not been further treated on the merits.

Art Unit: 2611

6. Claims 10-14, 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 10 discloses the limitation, “to at least partially remove an effect of at least said receiver filter on the multi-path profile, the unit comprising **a filter having a filter characteristic that approximates an inverted amplitude response** of at least said receiver filter”. The specification does not describe how this filter characteristic is accomplished, i.e., equations or drawings. Nor does the specification provide sufficient detail as to what exactly is meant by “approximates an inverted amplitude response”. Thus the specification does not enable one skilled in the art to make and/or use the invention.

Claims 11-14, 16 are rejected based on its dependency upon rejected claim 10.

7. Claims 21-23, 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 21 discloses the limitation, “where said unit comprises a filter having **a filter characteristic that approximates an inverted response** of at least said mobile station receiver filter”. The specification does not describe how this filter characteristic is accomplished, i.e., equations or drawings. Nor does the specification provide sufficient detail as to what exactly is meant by “approximates an inverted

Art Unit: 2611

response”. Thus the specification does not enable one skilled in the art to make and/or use the invention.

Claims 21-23, 25 are rejected based on its dependency upon rejected claim 10.

8. Claim 32 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 32 discloses the limitation, “a filter selected to have a **filter characteristic that approximates an inverted response**”. The specification does not describe how this filter characteristic is accomplished, i.e., equations or drawings. Nor does the specification provide sufficient detail as to what exactly is meant by “approximates an inverted response”. Thus the specification does not enable one skilled in the art to make and/or use the invention.

9. Claims 34-37 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 34 discloses the limitation, “a filter having a filter characteristic **that approximates an inverted amplitude response** of at least said receiver filter”. The specification does not describe how this filter characteristic is accomplished, i.e., equations or drawings. Nor does the specification provide

sufficient detail as to what exactly is meant by “approximates an inverted amplitude response”.

Thus the specification does not enable one skilled in the art to make and/or use the invention.

Claims 35-38 are rejected based on their dependency upon rejected claim 35.

***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

11. Claims 1-2, 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 discloses the limitation, “at least partially removing comprises passing the received CDMA signal through a filter selected to have “a filter characteristic that approximates an inverted amplitude or power response”. The language “approximates an inverted amplitude or power response” is vague and indefinite as the examiner is unable to ascertain a clear meaning of this phrase. The examiner suggests applicant rewrite the claim to particularly point out and distinctly claim the subject matter applicant regards as the invention.

Accordingly, the claims 1-2, 38 have not been further treated on the merits.

12. Claims 10-14, 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 10 discloses the limitation, “approximates an inverted amplitude response of the at least said receive filter”. The language, “approximates an inverted amplitude response” is vague and indefinite as the examiner is unable to ascertain a clear meaning of this

Art Unit: 2611

phrase. The examiner suggests applicant rewrite the claim to particularly point out and distinctly claim the subject matter applicant regards as the invention.

Accordingly, the claims 10-14, 16 have not been further treated on the merits.

13. Claims 21-23, 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 21 discloses the limitation, “where said unit comprises a filter having a filter characteristic that approximates an inverted response of at least said mobile station receiver filter”. The language, ” approximates an inverted response” is vague and indefinite as the examiner is unable to ascertain a clear meaning of the phrase. The examiner suggests applicant rewrite the claim to particularly point out and distinctly claim the subject matter applicant regards as the invention.

Accordingly, the claims 21-12, 25 have not been further treated on the merits.

14. Claim 32 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 32 discloses the limitation, “filter characteristic that approximates an inverted response”. The language, approximates an inverted response” is vague and indefinite as the examiner is unable to ascertain a clear meaning of this phrase. The examiner suggests applicant rewrite the claim to particularly point out and distinctly claim the subject matter applicant regards as the invention.

Accordingly, the claim has not been further treated on the merits.



15. Claims 34-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 34 discloses the limitation, “filter characteristic that approximates an inverted amplitude response”. The language, “ approximates an inverted amplitude response” is vague and indefinite as the examiner is unable to ascertain a clear meaning of this phrase. The examiner suggests applicant rewrite the claim to particularly point out and distinctly claim the subject matter applicant regards as the invention.

Accordingly, the claims 34-37 have not been further treated on the merits.

### ***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a.) Jorswieck et al. discloses in US 2006/0193294 A1 MIMO Signal Processing Method Involving A Rank-Adaptive Matching of The Transmission Rate.

b.) Smee et al. discloses in US Patent 6,522,683 B1 Method and Apparatus For Adaptive Linear Equalization For Walsh Covered Modulation.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence B Williams whose telephone number is 571-272-3037. The examiner can normally be reached on Monday-Friday (8:00-6:00).

Art Unit: 2611


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ghayour Mohammad can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lawrence B. Williams

lbw

October 15, 2007

  
**MOHAMMED GHAYOUR**  
**SUPERVISORY PATENT EXAMINER**